

CLAIMS

What is claimed is:

1. A plug inserted into and enclosing an opening within a wall of a hollow post and securing a wire harness running within said hollow post, comprising:

at least two locks projecting out from a surface of said plug and securing said plug within the opening, at least one of said locks being located at or near a first end of said plug, and at least one of said locks being located at or near a second end of said plug, said locks resiliently engaging an edge of the opening and aligning said plug within the opening along a first axis;

at least two tensioners projecting out from said surface of said plug and resiliently engaging the edge of the opening and aligning said plug within the opening along a second axis, at least one of said tensioners being located at or near a first edge of said plug, and at least one of said resilient tensioners being located at or near a second edge of said plug;

at least one stabilizer projecting out from said surface of said plug and resiliently engaging the wall, thereby exerting tension within the plug along a third axis; and

at least one fastener for securing the wire harness to said plug.

2. The plug according to claim 1, wherein said first and second axes are approximately perpendicular to one another.
3. The plug according to claim 1, wherein said third axis is perpendicular to said first and second axes.
4. The plug according to claim 1, wherein said first and second ends of said plug lie opposite to one another, and said first and second edges of said plug lie opposite to one another.
5. The plug according to claim 1, wherein said hollow post is a pillar of an automobile.
6. The plug according to claim 1, wherein said plug is a one-piece monolithic structure.
7. The plug according to claim 1, wherein said at least one stabilizer comprises a pair of resilient protrusions extending out from said surface of said plug.
8. The plug according to claim 1, further comprising at least two stabilizers, with at least one of said stabilizers located near said first edge of said plug, and at least one of said stabilizers located near said second edge of said plug.

9. The plug according to claim 1, wherein said fastener comprises at least one clip that projects out from said surface of said plug and secures the wire harness.
10. The plug according to claim 1, wherein said fastener comprises a tie that wraps around the wire harness and then attaches to said plug.
11. The plug according to claim 1, wherein each of said at least two locks initially engages the edge of the opening with a generally rounded end portion that promotes alignment of said plug respective to the opening.
12. The plug according to claim 1, wherein each of said at least two tensioners initially engages the edge of the opening with a generally rounded end portion that promotes alignment of said plug respective to the opening.
13. A method for securing a wire harness running within a hollow post, comprising the steps of:
 - attaching the wire harness, through an opening in a wall of the post, to a plug; and
 - securing said plug within the opening in the wall, said securing step including the sub-steps of:
 - aligning said plug within the opening along a first axis in response to said plug exerting a first force against an edge of the opening,

aligning said plug within the opening along a second axis in response to said plug exerting a second force against the edge of the opening, and

exerting a third force against the wall of the post by said plug, said third force being directed along a third axis perpendicular to said first and second axes.

14. The method according to claim 13, wherein said first force is established through compression of two or more resilient clips of said plug by the edge of the opening, and said second force is established through compression of two or more resilient tensioners of said plug by the edge of the opening.

15. The method according to claim 13, wherein said third force is established through compression of two or more resilient protrusions, extending out from a surface of said plug, by the wall of the post.

16. The method according to claim 13, wherein said first axis lies approximately ninety degrees from said second axis.

17. A pillar shield for securing a wire harness running within a pillar, comprising:
a generally planar-shaped body designed to close off an opening within a wall of the pillar;

at least two clips projecting out from said body of said pillar shield and securing said pillar shield within the opening in the wall, said at least two clips resiliently

compressed by an edge of the opening, thereby aligning said pillar shield within the opening along a first axis;

at least two tensioners projecting out from said body of said pillar shield, said at least two tensioners resiliently compressed by the edge of the opening, thereby aligning said pillar shield within the opening along a second axis;

at least two stabilizers projecting out from said body of said pillar shield, said at least two stabilizers resiliently compressed by the wall of the pillar, thereby generating tension, directed along a third axis, between said pillar shield and the wall of the pillar;
and

at least one fastener for attaching the wire harness to said pillar shield.

18. The pillar shield according to claim 17, wherein said first axis lies approximately ninety degrees from said second axis.

19. The pillar shield according to claim 17, wherein said third axis lies perpendicular to said first and second axes.

20. The pillar shield according to claim 17, wherein at least one of said clips is located at an end of said pillar shield, and at least one of said clips is located at an opposite end of said pillar shield.

21. The pillar shield according to claim 17, wherein at least one of said tensioners is located nearby an edge of said pillar shield, and at least one of said tensioners is located nearby an opposite edge of said pillar shield.

22. The pillar shield according to claim 17, wherein said pillar shield is a one-piece monolithic structure.

23. The pillar shield according to claim 17 wherein said fastener comprises at least one clip projecting out from said body of said pillar shield and securing the wire harness.

24. The pillar shield according to claim 17, wherein said fastener comprises a tie that wraps around the wire harness and then attaches to said pillar shield.

25. A pillar shield for securing a wire harness running within a pillar, comprising:
a generally planar-shaped body designed to close off an opening within a wall of the pillar;

at least two clips projecting out from said body of said pillar shield and securing said pillar shield within the opening in the wall, said at least two clips resiliently compressed by an edge of the opening, thereby aligning said pillar shield within the opening along a first axis;

at least two stabilizers projecting out from said body of said pillar shield, said at least two stabilizers resiliently compressed by the wall of the pillar, thereby generating

tension, directed along a second axis, between said pillar shield and the wall of the pillar;
and

at least one fastener for attaching the wire harness to said pillar shield.

26. The pillar shield according to claim 25, wherein said first axis lies approximately ninety degrees from said second axis.

27. A pillar shield for securing a wire harness running within a pillar, comprising:
a generally planar-shaped body designed to close off an opening within a wall of the pillar;

at least two clips projecting out from said body of said pillar shield and securing said pillar shield within the opening in the wall, said at least two clips resiliently compressed by an edge of the opening, thereby aligning said pillar shield within the opening along a first axis;

at least two tensioners projecting out from said body of said pillar shield, said at least two tensioners resiliently compressed by the edge of the opening, thereby aligning said pillar shield within the opening along a second axis; and

at least one fastener for attaching the wire harness to said pillar shield.

28. The pillar shield according to claim 27, wherein said first axis lies approximately ninety degrees from said second axis.